WASHINGTON STATE DEPARTMENT OF ECOLOGY

The Closed-Loop Scoop

Washington State Department of Ecology, Solid Waste & Financial Assistance Program

August 2003

Publication No. 03-07-005

Contents

Three New Ways to Invest in Sustainability

Green spending for public schools, local governments, and state agencies

Computer Recycling
The Washington state Department of General Administration (GA) has added computer recycling to the state's fluorescent lamp recycling contract with Eco-Lights (Total Reclaim). This contract can be used by all state agencies, political subdivisions (including school districts), qualified nonprofit corporations, and participating institutions of higher education (colleges and universities, community and technical colleges). State Contract No. 11601 (Spent Lighting, Computer and Electronic Equipment Collection, Reuse, Recycling and Disposal Services) is available on-line at http://www.ga.wa.gov/servlet/PCAContractDetailSv?contnbr=11601. Click on "Current Contract Information Document."

Honda Civic Hybrid Sedan
The Vehicle Acquisition Team at GA has just awarded a purchase order for the new 2003 Honda Civic hybrid gas/electric four-door sedan. This new vehicle supports both the statutory requirement for the state to purchase high MPG vehicles and the Governor's initiative on sustainability. (This model is EPA rated at 48 MPG city, 47 MPG highway, and has an emissions certification of ULEV.) Price received was excellent, $18,999.21 with an automatic transmission. As bid, the order had an option for ordering additional vehicles for other Purchasing Co-op members through November of 2003, subject to limited vehicle and color availability. Vehicles are to be picked up at the selling dealership in Yakima or separate delivery arrangements may be made. For additional information on ordering this vehicle, go to the GA Web site at http://www.ga.wa.gov/servlet/PCAContractDetailSv?contnbr=AD409 or contact Kristy Brodersen at 360-902-7420, e-mail kbroder@ga.wa.gov. All orders are to be placed through this office.

Chlorine-Free Paper
GA's Central Stores has been working hard to offer products that will protect the environment and help agencies reach their Sustainable Practices goals. Central Stores is currently negotiating to bring in a supply of chlorine-free paper made from 100 percent recycled materials. This paper is made using a process that eliminates the need for chlorine. Brightness and opacity are not affected.

This paper looks, feels, and works like the paper you are using now; only the toxic chemical process that pollutes our rivers and streams has been eliminated. Central Stores needs your assistance to get the best possible price. Contact Lance Yount at 360-902-0431 or lyount@ga.wa.gov and let him know you're willing to try chlorine-free paper and possibly use it at your office. This information will be used to determine overall interest and obtain the best possible price for this product. Remember: for only a few cents more per ream you can do your part to protect our environment. You can visit their Web site at https://www.ga.wa.gov/cs/infomay.htm. Central Stores customers include state agencies, political subdivisions (such as school districts, cities and counties), and qualifying nonprofit organizations.

New Solid Waste Rule Affects Status of Recycling Facilities

On February 10, 2003, a new solid waste rule, Chapter 173-350 WAC, Solid Waste Handling Standards, became effective. One component of the new rule is that certain solid waste facilities may be **exempt from solid waste permitting**. These facilities include **certain types of recycling facilities**, compost facilities, intermediate solid waste handling facilities (or material recovery facilities), piles used for treatment or storage, and moderate risk waste facilities.

A key provision of exemption from having to obtain a solid waste permit is that these facilities must notify both the Washington State Department of Ecology (Ecology) and the local health jurisdiction (LHJ) that they believe they qualify for exempt status. Read on to see how Ecology is making this easy!

A letter informing facilities of the new rule, along with forms designed for the notification process, was sent in July to facilities that Ecology believes fit the criteria for exemption from solid waste permitting. The rule requires that the notification forms be returned to Ecology and the LHJ for consideration. If facilities do not return the form, they may be required to obtain a solid waste permit from the LHJ, and they may be subject to a civil penalty from Ecology.

The rule also says that while facilities may be exempt from the solid waste permitting requirement, they are still required to complete an annual report on forms sent each year by Ecology. The forms will be mailed in January and are due back in April. **The annual report for facilities exempt from permitting under the new rule will track information similar to what is in the existing Washington State Recycling Survey.** One difference is that under the new rule, permit-exempt facilities that do not submit an annual report to Ecology and their local health department may be subject to a civil penalty from Ecology.

The Recycling Survey will still proceed for facilities or haulers that do not fall under the exempt status of the new solid waste rule. Data obtained through both of these reporting processes will be used to determine the state's recycling rate, pursuant to the 50 percent recycling goal set by the legislature for the year 2007.

Facilities may refer to Chapter 173-350 WAC, Solid Waste Handling Standards, or call Ecology to find out what information must be tracked in order to complete the annual report and to find other standards required to maintain a permit exemption. The new rule is available on the Solid Waste & Financial Assistance Program Web site at http://www.ecy.wa.gov/programs/swfa/facilities/350.html.

If you have any questions on what the new rule means to you, please contact your Ecology regional solid waste facilities representative or Gretchen Newman at 360-407-6097 or gnew461@ecy.wa.gov.

Calendar of Events

August 24, 2003, Simplicity Conference: Linking Sustainability, Social Justice, and Spirit, at Seattle University. For more information, call 1-877-UNSTUFF or visit http://www.seedsofsimplicity.org/events.asp.

Sept. 14-17, 2003, **22nd Annual Congress & Expo** of the National Recycling Coalition will be take place in Baltimore. For details, contact the NRC at 202-347-0450 or visit their Web site at http://www.nrc-recycle.org/.

October 14-16, 2003, Wastecon 2003 will be presented in St. Louis. For details, contact the SWANA (Solid Waste Assn. of N. America) at 800-467-9262 or visit their Web site at http://www.swana.org/.

October 22-24, 2003, Coast Waste Management Association Conference, will be held in Victoria, BC. For information, call CWMA at 250-752-8293 or visit their Web site at http://www.cwma.bc.ca.

October 24, 2003, Take Back Your Time Day You don't have to go anywhere for this one—not even to work! To learn more, e-mail John de Graaf at jdegraaf@kcts.org, call 206-443-6747, or visit the Web site at http://www.timeday.org.

October 27 - 29, 2003, Brownfields 2003: Growing a Greener America, will take place in Portland, Oregon. Cosponsored byThe International City/County Management Association, the US Environmental Protection Agency and a host of other organizations. Registration information on-line at http://www.brownfields2003.org.

It's Green Thumbs Up East of the Mountains

Yakima garden flowers with little help from H_2O

Water-wise gardening means grouping plants together that require the same amount of water . . .

Yakima County is a beautiful place to live. There are acres of green fields and every home has a nice lush green lawn . . . as long as there is irrigation water. Citizens of Yakima must water constantly. To help win the battle of keeping lawns and flower gardens alive and to educate the community about water-wise gardening, Yakima County Solid Waste, The Yakima Area Arboretum, and Ecology's Central Regional Office partnered to build a Xeric Demonstration Garden.

Xeric gardening does not necessarily mean that a rock garden is the way to go, nor does it mean using only native plants. It is simply water-wise gardening. Water-wise gardening means grouping plants together that require the same amount of water, planting flora with low water requirements, creating turf areas that are of a manageable size and are planted with grass that is appropriate for use, spreading mulch to reduce evaporation, and irrigating efficiently.

The Xeric Demonstration Garden has six different irrigation zones, each planted according to the water needs of its perennials. The hope is that people in the community will visit the garden and learn what they can do in their own back yard.

Renewable building materials have been demonstrated by the construction of a straw-bale wall. The wall is approximately 25 feet long and the width of a straw bale. It was built by volunteers over two weekends.

These volunteers came out of Yakima County Solid Waste's ten-year composting program and its recent expansion into classes on other natural gardening practices. The expansion includes four classes on gardening: Integrated Pest Management, Xeriscaping, Grasscycling, and Composting. Each class has approximately 50 participants, and they are asked to give volunteer time in return for the free class. This has been a very successful program for Yakima County Solid Waste as their volunteers consistently come back to volunteer and attend more classes. The garden and the straw-bale wall are proof of the volunteers' dedication.

Individual Recycler Succeeds Where Organization Fails, by Jon Bennett

While most of us conscientiously recycle all we can both at home and at the office, we can easily miss other opportunities, thinking that "someone else will do it."

As an example, when I started attending singles dances at the Thurston County Fairgrounds several years ago, I assumed that the janitorial staff was recycling the cans and bottles that we left behind. When I inquired of the groundskeeper, he stated that his supervisor didn't want him recycling because it made for "too many containers." Since I usually stayed afterwards to help clean up, I decided to start doing the recycling myself.

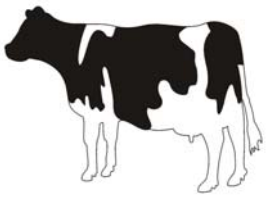
With a crowd of around two hundred people at a dance, I usually gather at least one large garbage bag of cans and bottles weighing around twenty to thirty pounds, and around sixty pounds at New Year's because of all the champagne bottles. With dances twice a month, the volume of recycled material adds up fast. There is no cost to me, and altogether it only takes about a half hour of my time, including the time to take the material to the recycling center at Hawks Prairie. Since this is a highly visible activity, it also helps promote the recycling cause. I am always pleased when the groundskeeper mentions that some other group at the Fairgrounds has also decided to start recycling.

Last spring, while attending the Lacey Fun Fair, I noticed that their cans and bottles were just thrown in with the regular garbage with apparently no recycling effort being made. I have wondered how much recyclable material was discarded, based on a likely attendance of several thousand people. When I have mentioned this situation to attendees, they were surprised, thinking that municipalities especially would be more conscientious about recycling. It would only take one person to bring this to the attention of management, and only a few to maintain some recycling containers.

It is easy for us to overlook or ignore what could be many opportunities to contribute to the recycling cause, thinking that someone else is already doing it. Often, a little inquiring and a minimum of effort on our part can make a substantial difference.

King County Explores "Manure Power"

A new way to support dairy farmers and boost air and water quality



"The impetus was to help farmers with waste management issues, but the study suggests this can be an extremely innovative way to turn dairy waste into valuable resources and that it could be an attractive business venture," Sims said.

In mid-July, King County Executive Ron Sims said that a system to convert methane gas from cow manure into electricity would give dairy farmers, along with regional air and water quality, a much-needed break. "Manure power" could also generate revenue for the project through sale of "green" electricity, organic soil amendments and liquid fertilizers.

"Turning manure into electricity would not only help reduce odor and other dairy manure management problems in rural King County, it would bring tremendous environmental benefits," Sims said.

Sims's comments came in response to a recent study looking into the viability of a manure methane gas "digester" on the Enumclaw Plateau. Environmental Resource Recovery Group of Kansas completed the study for the County, King Conservation District, Puget Sound Energy, Bonneville Environmental Foundation, Washington State University Energy Program, Seattle City Light, and several local dairy farmers.

Managing manure is a challenge for dairy farmers in King County, home to about 40 dairies and 12,000 mature dairy cows. A single cow produces 100 pounds of manure daily. Typically, manure is stored in lagoons and later sprayed onto fields. Odor complaints and costs associated with nutrient management are among the factors limiting growth and economic viability of dairies in King County.

What's more, the manure creates greenhouse gas emissions and can potentially leach into waterways near dairy farms.

"With increasing land values that prevent farmers from increasing their land ownership and a need for increased herd sizes, a methane digester would answer many community issues on the Enumclaw Plateau," said Enumclaw dairy farmer Janet Baker. "Our issues include manure disposal, odor control, and clean water. This would provide a new energy source for electricity, reclaimed water for irrigation, a proven compost product for home and commercial gardeners, and keep the dairy industry alive on the Plateau, with milk locally produced. A winner for all."

Sims said building a manure digester in King County is several years away. A centralized location on the Enumclaw Plateau would make the most sense because that's where most King County dairies are located.

The King County Department of Natural Resources and Parks is already involved in projects to turn methane gas from its wastewater treatment plants and solid waste landfill into electricity. The dairy biogas digester project builds on those successes.

A digester uses microorganisms to break down solids in cow manure to produce methane gas that would then fuel an electrical generator that would produce "green" power. Manure from 6,000 cows can produce 107 billion British thermal units (BTUs), which when converted to electricity can power about 800 households.

"We are encouraged about the level of participation in this particular project," said Mike Richardson, manager of renewable energy, customer programs at Puget Sound Energy. "It is an excellent solution for dairy farmers to address their waste management issues, while providing the region with a valuable renewable resource."

Beyond creating a renewable energy source, the digester would earn environmental tax credits for the developer. The manure solids would be converted into organic soil amendments, and the liquid portion would be filtered with current water treatment technology to produce water suitable for reuse purposes and concentrated organic liquid fertilizer.

To find out more:

For more information about efforts to convert manure into electricity, contact Rick Reinlasoder in the King County Agriculture Program at 206-263-6566, or e-mail rick.reinlasoder@metrokc.gov. Or visit their Web site: http://dnr.metrokc.gov/wlr/lands/agricult.htm.

From Waste-to-Worth

Jay Shepard, Sustainability Strategist

It is staggering, the amount of stuff we consume—as a community, a culture, and a species. For most of you reading this newsletter, that is no surprise. You are probably thinking, "Tell me something I don't already know."

Right now, we know everything we need to know. We know not only that we consume a tremendous volume of natural resources, but that a lot of those resources turn into waste. We know that the earth, which seemed incredibly big to us when we were young, might actually be smaller than our appetite. And not only are our personal appetites (and per capita waste generation) growing, so is the number of people on the earth. We know all this.

The situation is illustrated in the following excerpt from *Inventing the Future: Reflections on Science, Technology and Nature*, by David Suzuki, (Toronto: Stoddart Publishing Co. Limited, 1989):

> If you look at the history of mankind on this planet, it is only in this century that growth has become such an obvious part of life. For virtually all our species' history, change was imperceptible, our impact on the planet was slight. On a graph of our numbers, use of food, air, water, soil, the speed and distance of travel and communication, the curves are virtually flat for ninety-nine per cent of our history. They only begin to turn up in the past century, and then in our lifetime, through exponential growth, they leap off the page.
>
> It took all our history to reach a population of a billion people on the planet. But then in a century and a half, we doubled twice to four billion. Population increases in the industrialized countries have dropped dramatically, but there are parts of the world with doubling times of twenty to thirty years. Already impoverished, they will need twice as much food even though there will be no new land for agriculture and ocean yields have already peaked!
>
> Our dilemma is starkly illustrated by imagining a test tube with bacterial medium in it. At 11:00 we introduce one bacterial cell with a doubling time of one minute. So at 11:00 there is one cell, at 11:01 there are two, at 11:02 there are four, and so on until at 12:00, the tube is full. Then when is the tube half full? The answer, of course, is at 11:59. If you were a bacterium, when would you become aware that there was a space (or population) problem? At 11:58, the tube would be one-quarter full, at 11:57, one-eighth full and so on. If bacterium were to say to its mates at 11:55, "I think we've got a space problem," he'd be laughed out of the tube—any sensible bacterium could see it was ninety-seven percent empty and they had been around for fifty-five minutes! Yet they'd be only five minutes away from filling it up."

Think about it. There is no more "American frontier." We in Washington State are in it. We got to the Pacific Ocean and said "Drat!" Our economic growth has been tied directly to our population growth and the availability of the untapped natural resources that existed here before Euro-American settlement.

In 1890, the year after being granted statehood the population of Washington was 350,000 people. In 1970, the population was 3,000,000. By 2002, 6,000,000 of us lived in our state.

We know what we need to know. It appears that we don't know what to do about it. Or at least we are unwilling to take a real look at what we do know.

Editor's Note: There is never agreement on what the future will bring. Dr. Suzuki's analogy uses a steady rate of doubling every minute, but world population has doubled at varying rates. It took more than 100 years to double from one to two billion, and then reached four billion in 47 years. World population growth has since slowed, according to both the United Nations Population Division and the U.S. Census Bureau. Using current trends, both these agencies predict that world population will not double again in the next 50 years. The U.N., in fact, predicts it will not double in the next 150 years. But a rate that speeds up and then slows down can always speed up again.

To find out more:
United Nations report, *The World at Six Billion* http://www.un.org/esa/population/publications/sixbillion/sixbillion.htm
U.S. Census Bureau report, *World Population Profile: 1998* http://www.census.gov/ipc/prod/wp98/wp98.pdf

For the Love of Nature

Is it selfless or selfish?

This is
A Rock and a Hard Place:
a quarterly something-to-think-about column from the editor

Do we want others to love us the way we love nature?

It's high summer and the snowpack has melted from the alpine trails in the mountains. We love nature and we want to be there. We have to go there—if only for the weekend—to remember how much we love nature. Nature will remind us that we prefer the work of gathering campfire wood or catching fish to whatever it was we were doing daily back there in the lowlands.

But does nature really love us in return? Our little bit of campfire smoke or lost fishing line might not dampen nature's love any more than the little quirks we learn to live with in our partners. But how does nature feel about the waste created in getting us up the hill?

Nature has to absorb all those impacts, too—the tailpipe emissions, the drops of oil and the rubber dust we leave, all the similar sorts of waste created getting our car's fuel and fluids to a retail outlet, and all the rest of the life cycle impacts associated with our use of cars. Do we want others to love us the way we love nature?

Let me make it clear that I'm asking myself these questions after a weekend trip—by car—to go backpacking in Olympic National Park. I'm trying to figure out what other options we have. We can take a bus until we're somewhere near a trailhead, and (assuming the bus was making the trip anyway) we won't add much to environmental degradation. But if we all take that option, they'll have to increase the number of buses running.

We can try riding our bikes up to a trailhead, but that ride might take the whole weekend in itself. (Here's a good option for a weeklong hike, though.)

We can move to the country so that maybe we have enough nature in our own backyard that we don't need to drive to the mountains. (But, of course, we have to drive farther to work every day.)

We can find a job in the mountains, and hope that the job does not depend on an influx of weekend nature lovers in their cars.

We can pay more attention to the nature around us: the birds in our town's trees, the stars in the night sky, the faces of our friends.

When we're between a rock (Mt. Rainier) and a hard place (work), it's nice to have some company.

New Publications Available from Ecology

The following are available on-line (via the respective links) or from Ecology's Solid Waste and Financial Assistance Program at the phone numbers indicated:

Coordinated Prevention Grants (CPG) Biennial Report, http://www.ecy.wa.gov/biblio/0207013.html, 360-407-6060.

2004-05 Coordinated Prevention Grant Guidelines and Application Forms, http://www.ecy.wa.gov/biblio/0307037.html, 360-407-6060.

2003-2005 Remedial Action Grant Guidelines, http://www.ecy.wa.gov/biblio/99505.html, 360-407-6062.

A Pocket Guide to Sustainability, http://www.ecy.wa.gov/biblio/0307017.html, 509-454-7863 or 360-407-6129.

Terry Husseman Sustainable Schools Awards Ceremony, 2003

A report from school-awards coordinator, Michelle Payne

"You can imagine where all eyes in the house were focused when the fire truck pulled up."

"Thankfully, Senator Karen Fraser offered to address the crowd."

On May 14, 2003, Ecology hosted a ceremony to pay tribute to children and teachers for their efforts at creating and supporting a sustainable society. The ceremony took place at the Worthington Conference Center at St. Martin's College in Lacey.

Fourteen Washington public schools received the Terry Husseman Sustainable Schools Awards with awards ranging from $1,500 to $2,500. (See May 2003 *Closed Loop Scoop* for a list of the winners.)

Although I have hosted this ceremony many times and considered myself prepared for almost anything, this year was different. The challenges began early in my event preparation.

Many schools were unable to make the trip to Olympia for the ceremony. Hiring substitutes and bus drivers, obtaining permission slips, getting volunteers to chaperone the groups, all cost time and money. Costs involved in the transportation sometimes outweighed the award. It's too bad, because they missed a ceremony that's never to be forgotten!

Even the best plans crumble when the unpredictable takes place. In this case, on the morning of the ceremony, the Worthington Center lost power. The only electricity seemed to be going to the fire alarm, which beeped incessantly. The facilities staff worked hard to end the beeping, even shutting off our only light source with a curtain. Finally, the noise stopped.

As our guests gathered, they were encouraged to help themselves to the refreshments. Then one very wise young man asked where he could recycle his aluminum pop can. Good question, where was the recycling bin? Nobody could find the recycle bins in the dark, but with some persistence and a cigarette lighter, we found one.

Minutes before the ceremony began, our guest speaker called to say he could not make it. Thankfully, Senator Karen Fraser offered to address the crowd. She did an excellent job, with talking points noted on her hand.

As Cullen Stephenson, Ecology Solid Waste Program Manager, was delivering closing remarks, the power came back on and the fire alarm began beeping again. No fear, the fire department came to rescue us, lights and all! You can imagine where all eyes in the house were focused when the fire truck pulled up.

The Senator also entertained the crowd by taking photos of the groups for them, using their own cameras. In one case, taking five shots of the same group with just as many cameras. Because of all the mishaps, it was an interesting and fun awards ceremony.

Here's looking forward to next year's ceremony. What new twists and turns will we face then? Whatever it is, after this year—last minute cancellations, a late start, no lights, fire alarms (twice), an AWOL guest speaker/last minute replacement, no recycling bins, fire truck—we are ready for anything except dry and boring.

To find out more:

For more information on the awards program itself, please visit our Web site at www.ecy.wa.gov/programs/swfa/terryhusseman.html.

Department of Ecology

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We eagerly await your news.

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U.S. POSTAGE PAID
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